

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-9. (canceled)

10. (New) A signal evaluation method for detecting QRS complexes in an electrocardiogram (ECG) signal, comprising the following steps:

sampling the ECG signal to produce consecutive sampled signal values;

converting the ECG sampled signal values into consecutive discrete signal values of chronological order;

comparing the discrete signal values to a threshold function adaptively determined from the discrete signal values;

determining a frequency number within a defined segment of the consecutive discrete signal values, the frequency number being representative of the number of discrete signal values that are below the threshold function; and

comparing the determined frequency number to a defined frequency number threshold, wherein the presence of a QRS complex in the defined segment of the ECG signal is indicated when the determined frequency number is less than the frequency number threshold.

11. (New) The signal evaluation method according to claim 10, wherein said step of converting comprises subjecting the sampled ECG signal values to a high-pass filtering.

12. (New) The signal evaluation method according to claim 10, wherein said step of converting comprises subjecting the sampled ECG signal values to a band-pass filtering.

13. (New) The signal evaluation method according to claim 12, wherein upper and lower limiting pass frequencies of the band-pass filter are approximately 18 Hz and approximately 27 Hz.

14. (New) The signal evaluation method according to claim 12, wherein said step of converting further comprises generating absolute values of the filtered signal values.

15. (New) The signal evaluation method according to claim 14, wherein said step of generating absolute values is carried out by mathematically squaring the filtered signal values.

16. (New) The signal evaluation method according to claim 15, wherein the value of the threshold function is determined adaptively from a flowing averaging of the squared signal values for an averaging period determined by a memory factor.

17. (New) The signal evaluation method according to claim 10, wherein the value of the threshold function is determined adaptively from a flowing averaging of the discrete signal values, for an averaging period determined by a memory factor.

18. (New) The signal evaluation method according to claim 1, wherein the frequency number threshold is variably set as an adaptive threshold from the frequency number itself.